

## **REMARKS/ARGUMENTS**

### **Claim Amendments**

The Applicant has not amended any claims. Accordingly, claims 1-29 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

### **Claim Rejections – 35 U.S.C. § 103 (a)**

Claims 1-29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cezary Dubnicki et al ("Software Support for Virtual memory-Mapped Communication", 1996, pages 372-381) in view of Morris et al: (US7007157). The Applicant respectfully traverses the Examiner's rejections and submits the following remarks for the Examiner's favorable reconsideration.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. **Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations (MPEP 2143)**. In that regard, the Applicant respectfully submits that the Examiner's two references still fail to teach or suggest each and every element of the presently pending independent claims.

Dubnicki discloses a virtual memory-mapped communication (VMMC) for providing user-to-user data transfers. Dubnicki discloses eliminating operating system involvement in communication which minimizes software communication software. However, Dubnicki does not disclose providing **simultaneous** user-space and kernel-space access to a network layer over a single NIC port.

The Applicant's invention allows efficient and flexible access to a network interface controller (NIC), while eliminating the CPU as the bottleneck in the communication chain. However, in addition, the present invention provides a network device driver architecture which is suitable for implementation and integration into existing systems. Dubnicki does not disclose such an architecture. Additionally,

Dubnicki does not disclose enabling simultaneous integrated kernel-space access and user-space access to the NIC over the same NIC port. Dubnicki merely discloses a user-to-user communications model for the transfer of data.

The Examiner stated that Morris discloses a single, shared or common communication port for transmitting/receiving user and kernel mode data. However, Morris does not provide for simultaneous integrated kernel-space access and user-space access to the NIC over the same NIC port. Morris merely allows the access of user or kernel data during different modes at different times. Specifically, in the kernel mode, data packets from the kernel mode logic are accessed. In a separate user mode, user mode data packets are retrieved from memory. Morris does not teach or suggest the simultaneous access, rather Morris merely discloses operating in either one but not both modes simultaneously (see abstract, col. 4, lines 21-33). There is simply no disclosure of operating in both modes simultaneously to allow simultaneous access.

In contrast, the Applicant invention provides for the simultaneous user-space and kernel-space access to the network layer over the same NIC port, thereby leading to a reduction of the number of required NIC ports and eliminating the need for hardware re-design (See page 6, lines 16-24 of the Applicant's specification). Thus, the present invention may be used on existing hardware. Neither Morris nor Dubnicki teaches or suggests eliminating the requirement for a re-design of existing hardware.

Therefore, the Applicant respectfully submits that the simultaneous user-space and kernel-space access to a network layer over a single NIC port is simply not taught or suggest by either Dubnicki or Morris in combination or separately as recited in claim 1. Independent claims 15, 17, and 27 recite limitations analogous to claim 1 and also are not taught or suggested in Dubnicki or Morris. Claims 2-14 depend from amended claim 1 and recite further limitations in combination with the novel elements of claim 1. Claim 16 depends from amended claim 15 and recites further limitations in combination with the novel elements of claim 15. Claims 18-26 depend from amended claim 17 and recite further limitations in combination with the novel elements of claim 17. Claims 28 and 29 depend from amended claim 27 and recite further limitations in combination with


the novel elements of claim 27. Therefore, the allowance of claims 1-29 is respectfully requested.

### CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

  
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